

Board of Directors Meeting

02.24.2014

Agenda



- 1. Organizational Matters
- 2. Program Overview
- 3. Energy Program Initiatives
- 4. Transportation Program Initiatives

Approval of 11/6 and 11/12/13 Minutes



RESOLVED, that the minutes of the meetings of the Board of Directors held on November 6, 2013 and November 12, 2013, in the form previously provided to the members of the Board of Directors, be and hereby are approved.

Contracting Manual - Version 2.0



WHEREAS, the staff of the Trust has recommended modifications and improvements to the contracting manual previously approved by the Board of Directors;

NOW, THEREFORE, BE IT RESOLVED that the Trust's contracting manual, in the form so modified as of the date hereof and presented to the Board of Directors, be and hereby is adopted and approved.

RESOLVED, that in order to fully carry out the intent and effectuate the purposes of the foregoing resolutions, any of the Trust's officers be, and each hereby is, authorized to take all such further actions, and to execute and deliver all such further agreements, instruments, documents or certificates in the name and on behalf of the Trust, and under its corporate seal or otherwise, and to pay all such fees and expenses, which shall in their judgment be necessary, proper or advisable and to perform all of the obligations of the Trust in connection with the foregoing resolutions.

Independent Audit RFP



WHEREAS, the Chicago Infrastructure Trust (the "<u>Trust</u>") is required to engage an independent auditor to review and audit, and issue an opinion with respect to, the financial statements of the Trust for the periods (i) from inception to December 31, 2012 and (ii) for the 2013 fiscal year (the "<u>Audit Period</u>");

WHEREAS, in facilitation of the selection of an independent auditor, the Trust's contracting manual requires the Trust to issue a Request for Proposal ("RFP") and solicit responses to such RFP in accordance with the requirements of such contracting manual;

NOW, THEREFORE, BE IT RESOLVED, that the Trust's Chief Executive Officer be and hereby is authorized and directed to prepare and issue an RFP in compliance with the Trust's contracting manual with the objective of soliciting qualified, interested parties to serve as the Trust's independent auditor for the Audit Period; and

FURTHER RESOLVED, that the Trust's Chief Executive Officer be and hereby is authorized and empowered to interview and select, from among the respondents to such RFP, a qualified independent auditor to review and audit, and issue an opinion with respect to, the Trust's financial statements for the Audit Period.

STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2013



	Γotal
ASSETS	
Current Assets	
Cash	\$ 32,335
Grant Receivable	57,760
Prepaid Expenses	1,525
TOTAL ASSETS	\$ 91,620
LIABILITIES AND EQUITY	
Current Liabilities	
Accounts Payable	\$ 87,849
Accrued Expenses	3,771
Total Liabilities	91,620
Net Assets	
Beginning Net Assets	-
CY Net Income	-
Total Net Assets	_
TOTAL LIABILITIES AND NET ASSETS	\$ 91,620

STATEMENT OF ACTIVITIES BUDGET VS ACTUAL FOR THE YEAR ENDED DECEMBER 31, 2013



				2014	2014 Forecast	
		Total		Annual		
		over/(under)				
	Actual	Budget	Budget	Budget	Quarter 1	
Income						
Grants - City of Chicago	503,748	835,397	(331,649)	1,445,495	337,869	
Underutilized Properties	-	-	-	-	-	
Retrofit One Fees	-	-	-	-	-	
Total Income	503,748	835,397	(331,649)	1,445,495	337,869	
Expenses						
Advertising	-	7,500	(7,500)	-	-	
Bank Charges	285	550	(265)	-	-	
Dues & Subscriptions	5,434	5,000	434	5,000	1,250	
Promotional	250	2,000	(1,750)	-	-	
Insurance	56,550	83,542	(26,992)	229,149	73,890	
Professional Fees (see footnote)	211,530	189,000	22,530	272,020	72,355	
Meetings expense	17,052	18,000	(948)	17,000	4,250	
Office supplies and expenses	12,132	26,500	(14,368)	23,000	5,750	
Stationery & Printing	206	1,600	(1,394)	-	_	
Shipping and delivery expense	-	2,200	(2,200)	-	-	
Other General and Admin Expenses	-	58,601	(58,601)	-	-	
Payroll Expenses: Wages and taxes	159,615	310,394	(150,779)	765,126	152,774	
Rent or Lease	7,685	66,700	(59,015)	55,800	8,000	
Utilities	4,041	9,700	(5,659)	7,800	1,950	
Repair & Maintenance	1,816	-	1,816	-	-	
Software as a service	6,796	19,560	(12,764)	7,600	1,900	
Taxes & Licenses	850	2,850	(2,000)	-	-	
Travel and Entertainment	18,347	25,000	(6,653)	51,000	12,750	
Business meals	928	2,200	(1,272)	4,000	1,000	
Training	230	4,500	(4,270)	8,000	2,000	
Sub-Total	503,748	835,397	(331,649)	1,445,495	337,869	
Underutilized Property						
Total Expenses	503,748	835,397	(331,649)	1,445,495	337,869	
Income over expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Income over expenses FOOTNOTE: Professional fees include IT, Ac Public Relations & Energy Cons	counting & Au	-			\$	

Agenda



- 1. Organizational Matters
- 2. Program Overview
- 3. Energy Program Initiatives
- 4. Transportation Program Initiatives

Executive Summary



- Major milestone approaching closing of Retrofit 1.0 transaction
- CIT is increasingly attracting private sector ideas and interest
- Since mid-2013, CIT has been developing initiatives in each of the three program areas: (1) Energy; (2) Property; and (3) Transportation
- Based on CIT-City coordination, several initiatives have been prioritized for 2014:

	Program	Initiative	Proposed Launch	Precedents
1	Energy	Municipal Retrofit 2.0, Pools	Q1 2014	YMCA pools
2	Energy	Municipal Retrofit 3.0, Street Lights	H1 2014	Los Angeles, Washington, D.C.
3	Energy	Solar	2014	
4	Energy	Commercial PACE	H1 2014	CA , FL, CT programs
5	Transportation	Compressed Natural Gas (CNG) 2014 Plan	2014	
6	Transportation	4G Wireless Upgrade in CTA Subways	H1 2014	Montreal, Washington, D.C., New York City

 2014 success will rely on strong CIT-City collaboration and a commitment of resources to support the programs

Agenda



- 1. Organizational Matters
- 2. Program Overview
- 3. Energy Program Initiatives
- 4. Transportation Program Initiatives

Municipal Retrofit



Initiative Description

 Design and fund a comprehensive municipal energy efficiency program. Raise ~\$1B in private capital to save >10% energy in public facilities, reduce long-term City energy costs, create jobs, and make Chicago the greenest city in the world

Catalyst

- City is looking to make critical infrastructure upgrades to aging building systems, but does not want to threaten credit rating by using bonding capacity for projects with strong energy efficiency ROI
- City is committed to reducing greenhouse gas emissions as well as related pollutant emissions from stationary (i.e., building) usage

CIT's Value

- Researching and developing optimal financing options
- Extending City's borrowing capacity through off-credit, off-balance sheet transactions that do not monopolize bonding capacity
- Using a single, emerging financial instrument to reduce barriers and finance municipal, not-for-profit/cultural institution and home energy efficiency projects
- Aggregating retrofit projects across the City to increase scale, improve economics, quicken pace, and heighten impact



- Achieves Mayor's 2015 Sustainability Goal #4 Improve overall energy efficiency in municipal buildings by 10%
- Leads by example in use of off-credit, off-balance sheet financing mechanisms wellsuited for use in other sectors across the City







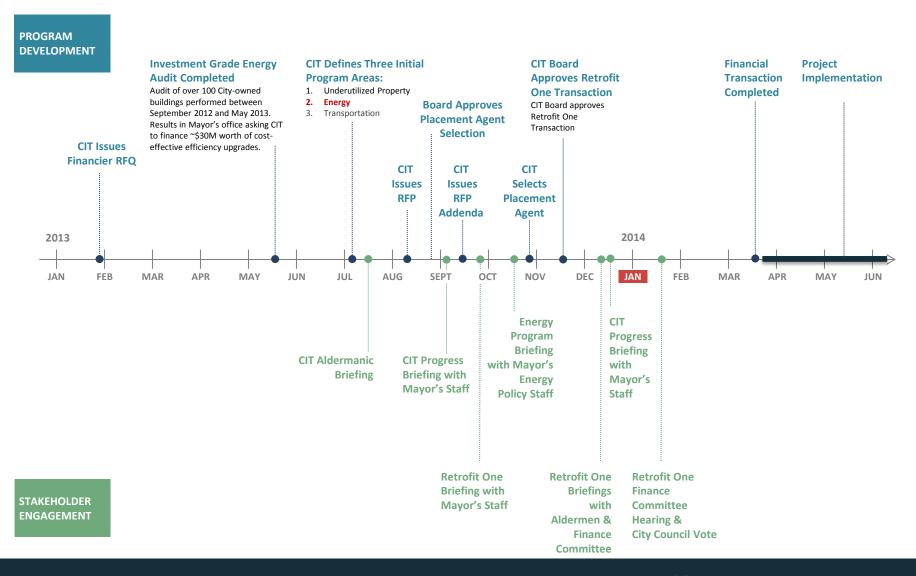
Retrofit 1.0 Energy Services Agreement (ESA) **Transaction Summary**



Attribute	Description	
ESA structure (Energy Services Agreement)	 Zero upfront and zero net cost Zero savings risk for City (save nothing, pay nothing) Off-credit for City Highly scalable Creates valuable role for Trust City / Trust keep upside, not financiers 	
Benefits	 60 buildings 18% reduction in energy use annually in these buildings 5 MM square feet Libraries, police, health care, unique facilities across 36 wards Creates 108 jobs 	
Savings	~ \$1.5MM annually	
Transaction features	\$12.2 MM project cost4.95% interest rate15 year contract	
MBE/WBE Participation	Significant and meets all City contracting criteria	
Status	Rate locked, finalizing transaction	

Retrofit 1.0 Program Development Timeline





Retrofit 1.0 Project Size Reductions



- Originally announced to exceed \$100M
- Reduced before CIT involved to \$76M
- \$37M DWM project put on hold due to lien structure concerns
- \$11.4M CPS project financed through lease, which did not require Trust involvement
- \$15.3M of \$27.5M 2FM project could not be financed at 4.95% over 14 years
- \$12.2M 2FM project in progress now

Retrofit 1.0 Energy Services Agreement (ESA) Transaction Status



Date	Activity
Week of February 17	 Conference calls to discuss open business points among CIT, BAPCC, City and ESCOs Complete sequence of events timeline
Week of February 24	Continue to draft documents to reflect agreed upon business points
Week of March 3	Continue to draft documents to reflect agreed upon business points
Week of March 10	Depending on status of business points, close transaction and deliver funds
Week of March 24	Project construction and installation begins

Retrofit 1.0 Trust Role Post Transaction



RETROFIT ONE - PROGRAM MANAGEMENT TASKS CHICAGO INFRASTRUCTU TRUST				
ROLES & RESPONSIBILITIES - Primary, Support, Oversight, Approval	ESCO	PBC	2FM	CIT
GEPC Contract Negotiations				
Fully negotiate and execute GEPCs with 3 ESCOs	Support	Support	Support	Primary
Risk Management				***************************************
Coordinate ESCO insurance and performance bonds		Primary		
Design and Permit Phase				
Oversee design process		Primary	Support	
Coordinate design approval process	Support	Primary	Support	
Coordinate permit process		Primary		
Cost Management				
Change Order management		Primary		
Implementation Phase				
Kick-off meeting coordination		Primary		Support
Communications with occupant departments		Primary	Support	
Consolidate and summarize ESCO progress reporting		Primary		
Work calendaring	Primary			
Site visit scheduling and coordination		Primary	Support	
Actual installation and construction	Primary			
Problem troubleshooting and critical issue communications		Primary	Support	
Quality and safety control oversight		Primary		
Manage environmental issues		Primary		
Commissioning oversight		Primary		
Environmental Management and Reporting				
Coordinate remediation activities - if needed		Primary		
Schedule Management				
Review and summarize 3 ESCO construction schedule updates		Primary		
	•	•	***************************************	•

ROLES & RESPONSIBILITIES - Primary, Support, Oversight, Approval	ESCO	PBC	2FM	CIT
External Communication Management				
Press, Aldermanic, and other inquiry management		Support		Primary
Compliance and Reporting				
Workforce Participation Review		Primary		
M/WBE Participation Review		Primary		
Labor Participation Review		Primary		
Technology Coordination				
CMMS	Support	Primary	Support	
GBMS integration coordination		Primary	Support	
Project Closeout				
All close-out tasks (punchlist, drawings, manuals, training, etc.)	Primary			
Punchlist process oversight		Primary	Support	
As-built Drawings - review and coordination		Primary	Support	
O&M Manuals - review & coordination	***************************************	Primary	Support	
Warranty - review and coordination		Primary	Support	
Training coordination		Primary	Support	
Energy Guarantee - initial setup and review of baseline reports		Primary	Support	
After Project Closeout				
Ongoing O&M	Support		Primary	
Verifying savings	Primary		Support	
Annual check-up on equipment	Primary		Support	
Payment Processing				
Invoicing Trust for construction	Primary			
% Completion verification		Primary		
Lien waiver collection		Primary		
Coordinate rebates and grants	Primary	Support		
Paying PBC	***************************************		Support	Primary
Paying ESCOs				Primary
Invoicing City under ESA	Support			Primary
Invoicing ESCOs under GEPC			Support	Primary
Paying investors				Primary

Retrofit 2.0 & 3.0 Candidate Projects



	Project Name	Description	Agency or Department
А	LED Street lighting (RFI)	Upgrade outdoor lights to LED	CDOT, 2FM
В	Indoor Pools (RFCP)	Retrofit indoor pools	Chicago Park District, Chicago Public Schools
С	Three Water Pumping Stations	Steam to electric conversion	Dept. of Water Management (DWM)
D	Lincoln Park Zoo	General HVAC, energy efficiency	Chicago Park District
E	O'Hare Co-Generation	Generate electricity and heat	Dept. of Aviation
F	O'Hare Facilities	General HVAC, lighting, energy efficiency	Dept. of Aviation
G	Public Schools	General HVAC, lighting, energy efficiency	CPS/PBC

Projects not included in Municipal Retrofit 2.0 and 3.0 will be vetted for inclusion in subsequent municipal retrofit transactions (i.e., Municipal Retrofit 4.0, etc.)

Retrofit 2.0 LED Street Light Energy Efficiency Replacement Program: Request for Information (RFI)



Program description

- Replace Chicago's 317,000+ Street Lights with high efficiency white light LEDs
- Create a Smart Network Lighting System, which will serve as a platform to provide operational efficiencies and revenue opportunities
- Privately finance the project; costs are repaid through energy and O&M savings

· City seeks to reduce structural costs, energy consumption and pollution emissions

Catalyst

- The cost and quality of LED lights have improved dramatically in recent years
- LED lighting conversion has generated a return on investment, but upfront capital is a barrier
- CDOT sponsored a "White Light LED" pilot and requested equipment demonstrations

CIT's Value

- CIT will pursue a new model construct Lighting As A Service Performance Agreement which involves a Build Operate Manage (BOM) arrangement
- CIT will negotiate with LED and network control firms to provide all of the upfront capital, manage the installation process and monitor the street light system network
- Program participants will be selected via a competitive, technology-neutral procurement process and will be paid through project savings
- · CIT will investigate potential for citywide digital signage for multi-use purposes
- Achieve energy and cost savings between 50% and 80% and improve ambient lighting

Impact

- Create jobs and reduce the impact of greenhouse gases
- LEDs last longer than incumbent units (10-15 years versus 4-6 years) and fail at a lesser rate than incumbent technologies, reducing maintenance costs
- The street light network will have adaptive controls with wireless links to the fixtures, which can adjust light levels and provide maintenance feedback
- Street lights as a platform can create a smart network that provides revenue and operational opportunities

BEFORE



AFTER





- Video
- Sound
- Security
- Meter-reading
- Etc.

Retrofit 2.0 RFI: Street Lights as a Platform



Overview

- Historically, street lights have been static pieces of infrastructure with one dimension
- Street lights are unique in that they cover almost every portion of the City and can network into a smart grid that is interactive and provides additional operational and revenue opportunities

Platform Opportunities

- Communication. Digital display and audio connections can be used for advertising
 to generate revenue streams and also enable mass public announcements and
 displays regarding safety, events, alerts, traffic, weather, navigation, etc.
- **Big data potential.** Real time data collection and storage can provide the city with unprecedented information at the street level that can be relevant for public safety
- Greater connectivity for residents. Wi-Fi hot spots can provide citywide internet access
- Traffic and safety management. Intelligent communication and response with street lights can help alleviate traffic congestion and guide emergency vehicles more safely to their destinations
- Car charging. Solar or grid-connected charging stations on lamp posts
- Video. Potential to incorporate video camera into light fixture

Operational Improvement

- Intelligent controls, maintenance. Real time monitoring can also instantly alert the network of equipment malfunction, enabling rapid repair deployment and eliminating the need for repair crew patrolling
- **Smart illumination.** On demand sensor technology can respond to the environment according to circumstance, by dimming or illuminating as appropriate
- **Advanced metering.** The lighting receiver can collect and transmit meter reading information for utility providers (gas, water, electric, etc.)
- **More efficient billing.** A GPS receiver is installed in each light to provide precise location monitoring and in turn simplifies billing and inventory efforts



Retrofit 2.0 RFI: LED Street Light Conversion Examples



Potential Impact

- Lighting accounts for 19% of electricity consumption worldwide
- Street lighting solutions can save \$13.27 billion per year in worldwide energy costs
- LED lighting can generate anywhere from 50 70% energy savings, 80% when paired with smart controls

Los Angeles Program

- In 2009, the City was operating 140,000 street lights (each with a 4 6 year lifespan) that cost up to \$52 million in operations and maintenance and used 197 million KWH per year
- The City explored replacing these lights with LED technology (10 12 year lifespan) in 5 years with a total project cost of \$57 million and the following projections:
 - Reduce carbon emissions by 40,591 metric tons
 - Reduce energy usage by 69 million KWH
 - 40% energy savings
- As of 2011, the City has installed 36,500 LED street lights with the following results:
 - Reduced carbon emissions by 8,674 metric tons
 - Reduced energy usage by 15 million KWH
 - 57.6% energy savings

Mayor's Lighting Partnership

- Sponsored by Philips, several cities have chosen to upgrade their street lighting networks to improve sustainability, reduce energy costs, and promote public safety and economic development at no upfront costs
- Boston converted thousands of street lights to LED, saving \$1 million and 8.9 million KWH in electricity per year
- Tampa saved \$92,000 per year in energy and maintenance costs and reduced usage by 738 KWH per year

Energy Initiative #1, Retrofit 2.0 Streetlights

Development Timeline





Agenda



- 1. Organizational Matters
- 2. **Program Overview**
- **Energy Program Initiatives** 3.
- **Transportation Program Initiatives** 4.

Transportation Initiative #2, Under Development

Compressed Natural Gas (CNG) 2014 Plan



Program description

- Coordinate between public and private stakeholders to facilitate the construction of the largest urban public access CNG fueling infrastructure in the country
- Lease underutilized City-owned properties to private CNG fueling providers
- Provide fleet procurement, management and fuel analysis for City fleet to maximize cost savings and pollutant emissions reductions



- Chicago has the highest gasoline and diesel prices in the country
- City intends to increase competitiveness by lowering the cost of conducting business
- City seeking alternative revenue sources to enlarge the tax base
- City desires a reduction in greenhouse gas emissions and vehicle tailpipe emissions

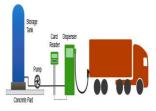


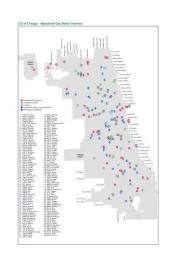
- Identify potential network of parcels for CNG fueling stations
- Provide a single, streamlined process to address land acquisition, zoning, permitting, landscaping and signage for CNG station developers
- Repurpose underutilized City property into revenue generating CNG stations
- Collaborate with 2FM to develop new alternative fuel vehicle acquisition and management plan
- Serve as intermediary between fueling providers, auto manufacturers, corporate fleets, environmental groups, retailers, City and Agencies

Impact

- Lower fuel costs, reduce at pump price volatility and petroleum reliance
- Reduce the cost of vehicle ownership for local fleet companies and City fleet
- Reduce greenhouse gas emissions and tailpipe pollutants
- Enable City to achieve alternative fuel vehicle acquisition targets
- Support policy objectives detailed in the Chicago Climate Action Plan, RTA Regional Green Transit Plan, Chicago Sustainability Action Plan





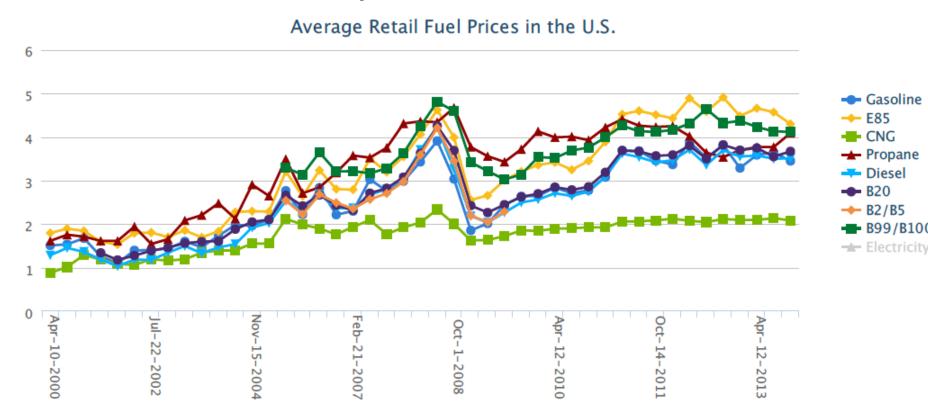


Dollars per GGE



Why CNG? —

CNG is the lowest cost, most price stable commercial vehicle fuel available



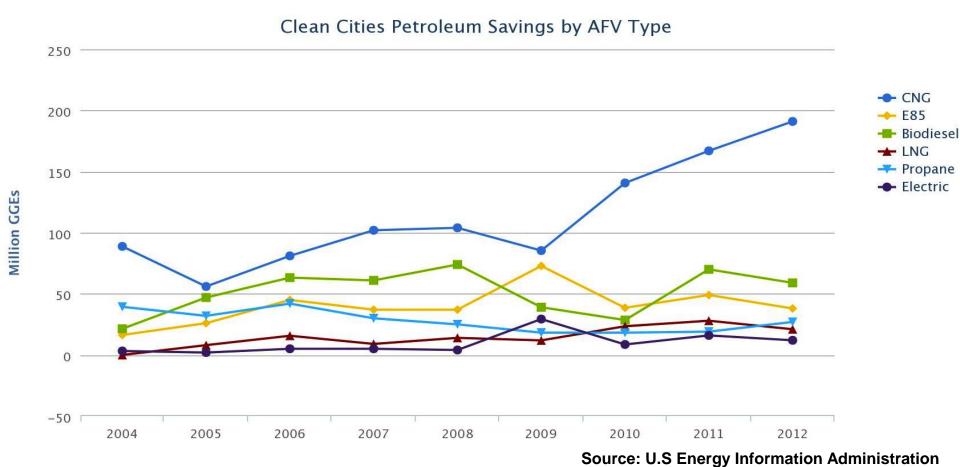
Date of Report

Source: U.S Energy Information Administration



Why CNG? —

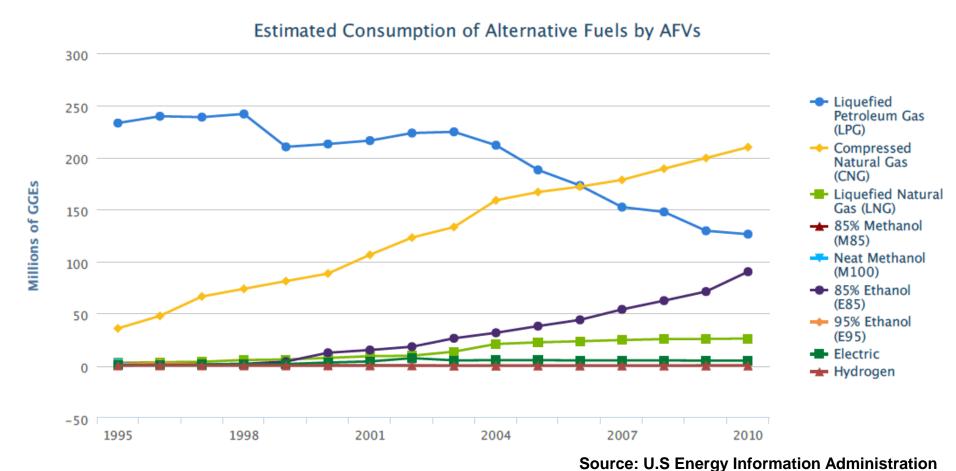
CNG provides the largest petroleum displacement potential of all Alt Fuels





Why CNG? —

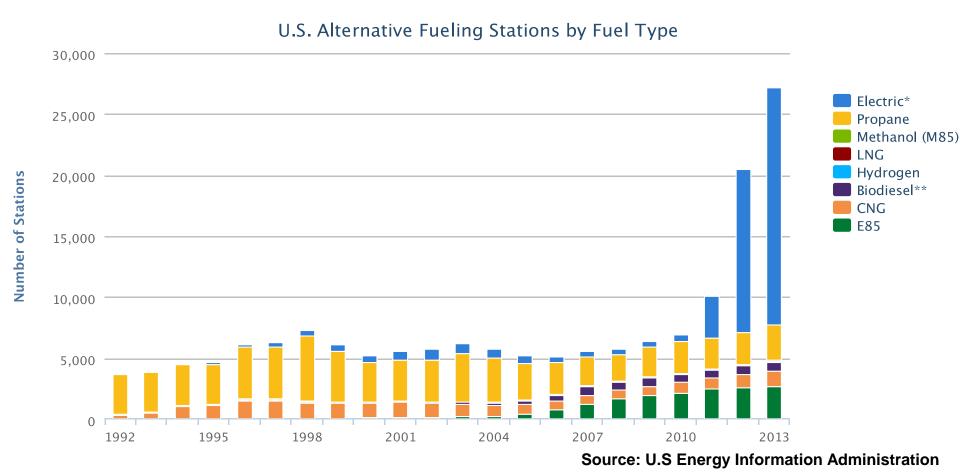
CNG has the highest demand growth nationwide of all ALT Fuels







Despite these trends, CNG fuel station growth lags relative to other Alt Fuels



Transportation Initiative #2, Under Development

CNG 2014 Plan Financial Analysis



Goal: Reduce operational expenses, Renew the City Fleet & Promote cleaner and more reliable vehicles for City services

By capturing fuel savings between the current and proposed fleet of City service vehicles and minimizing capital and operational expenditures, potential savings are estimated at the following levels:

Short Term Results

- ~\$27,000,000 reduction in fuel and maintenance costs over 10 years (General Purpose & Police Pursuit Vehicle Fleets)
- 3,964 new City Fleet vehicles added over 10 years
- Reduced down time for City services & greater flexibility servicing the Fleet

Long Term Results

 Enable public and private fleet operators to lower the costs of servicing customers and transporting goods in the City of Chicago.

Transportation Initiative #2, Under Deveopment

Development Timeline



PROGRAM DEVELOPMENT

